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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,919	12/07/2001	Timothy M. Gage	M-11998 US	6158

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EXAMINER
AILES, BENJAMIN A

CAMPBELL STEPHENSON ASCOLESE, LLP
4807 SPICEWOOD SPRINGS RD.
BLDG. 4, SUITE 201   ┌
AUSTIN, TX 78759

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/010,919	GAGE ET AL.
	Examiner	Art Unit	
	Benjamin A. Ailes	2142	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 January 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19 and 21-65</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19 and 21-65</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09

January 2006 has been entered.

2.   Claims 1-19 and 21-65 remain pending.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-15 and 21-65 are rejected under 35 U.S.C. 102(e) as being anticipated

by Ogier (2003/0095504), hereinafter referred to as Ogier.

5.   Regarding claims 1, 21, 36, and 51, Ogier discloses a method comprising:

establishing bi-directional connectivity of a network element in a network, comprising

receiving a first unreliable packet from said network element (para. 0042

(neighbor discovery protocol) para. 0227, lines 1-9);

storing an address of said network element in a neighbor pending list (para.

0220-0221);

sending a reliable packet to said network element (para. 0219); and

if an acknowledgement to said reliable packet is received from said network

element, accepting said network element as a neighbor (para. 0231).

6.   Regarding claims 2, 22, 37, and 52, in accordance with claims 1, 21, 36, and 51

respectively, Ogier discloses the method wherein said unreliable packet does not

require a response (para. 0219).

7.   Regarding claims 3, 23, 38, and 53, in accordance with claims 1, 21, 36, and 51,

respectively, Ogier discloses the method wherein said reliable packet requires a

response (para. 0227).

8.   Regarding claims 4, 24, 39, and 54, in accordance with claims 1, 21, 36, and 51,

respectively, Ogier discloses the method wherein said accepting said network element

as neighbor is done by moving said address of said network element from said neighbor

pending list to a neighbor list (para. 0231).

9.   Regarding claims 5, 25, 40, and 55 in accordance with claims 4, 24, 39, and 54,

respectively, Ogier discloses the method further comprising:

if said address of said network element is in said neighbor list, updating a

neighbor hold count for said network element (para. 0232, lines 1-6).

10.   Regarding claims 6, 26, 41, 56, in accordance with claims 1, 21, 36, and 51,

respectively, Ogier discloses the method further comprising:

determining if said address of said network element is in a dampening list (para.

0230).

11.   Regarding claims 7, 27, 42, and 57, in accordance with claims 6, 26, 41, and 56, respectively, Ogier discloses the method further comprising:

     if said address of said network element is in said dampening list, updating a value of a reliability count of said network element to reflect higher reliability of said network element (para. 0230).

12.   Regarding claims 8, 28, 43, and 58, in accordance with claims 7, 27, 42, and 57, respectively, Ogier discloses the method further comprising:

     if said value of said reliability count is a maximum value, updating a value of a reliability count of said network element to reflect higher reliability of said network element (para. 0230).

13.   Regarding claims 9, 29, 44, and 59, in accordance with claims 8, 28, 43, and 58, respectively, Ogier discloses the method wherein said maximum value is predetermined (para. 0208, lines 1-7).

14.   Regarding claims 10, 30, 45, and 60 in accordance with claims 8, 28, 43, and 58, respectively, Ogier discloses the method wherein said maximum value is dynamically adjusted according to a traffic condition in said network (para. 0219).

15.   Regarding claims 11, 31, 46, and 61 in accordance with claims 6, 26, 41, and 56, respectively, Ogier discloses the method further comprising:

     if said network element is not in said dampening list, adding said address of said network element to said dampening list, and setting said value of said reliability count of said network element to said maximum value (para. 0230).

16.   Regarding claims 12, 32, 47, and 62, in accordance with claims 11, 31, 46, and

61, respectively, Ogier discloses the method further comprising:

setting said neighbor hold count for said network element (para. 0230); and

sending a second unreliable packet to said network element (para. 0219).

17.   Regarding claims 13, 33, 48, and 63, in accordance with claims 1, 31, 36, and

51, respectively, Ogier discloses the method further comprising:

initiating a neighbor pending timer (para. 0212).

18.   Regarding claims 14, 34, 49, and 64, in accordance with claims 12, 32, 47, and

62, respectively, Ogier discloses the method further comprising:

if said acknowledgement to said reliable packet is not received before said

neighbor pending timer expires, removing said address of said network element

from said neighbor pending list, and updating said value of said reliability count to

reflect lower reliability of said network element (para. 0227, lines 18-23).

19.   Regarding claims 15, 35, 50, and 65, in accordance with claims 12, 32, 47, 62,

respectively, Ogier discloses the method further comprising:

if said acknowledgement to said reliable packet is received before said neighbor

pending timer expires, (para. 0227),

moving said address of said network element from said neighbor pending

list to said neighbor list, and (para. 0231), and

removing said address of said network element from said dampening list

(para. 0231).

Claim Rejections - 35 USC § 103

20.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

21.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

22.   Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ogier in view of Saleh et al. (US 6,856,627 B2), hereinafter referred to as Saleh.

23.   Regarding claim 16, Ogier and Saleh discloses a system for establishing bi-

directional connectivity with a network element in a network comprising:

    a central processing module (Ogier, para. 0034); and

    a neighbor pending list coupled to said central processing module, wherein said

    central processing module is configured to store an address of said network

    element in said neighbor pending list while said network element is in a process

of establishing said bi-directional connectivity with said system (Olgier, para.

0005);

a dampening list coupled to said central processing module, wherein said

dampening list is configured to store said address of said network element when

a value of a reliability count is lower than a maximum value, and said maximum

value is dynamically adjusted according to a traffic condition in said network (see

Ogier, para. 0210, 0212, and 0230, and see Saleh, col. 11, lines 26-60).

The use of a neighbor table is taught by Ogier, the neighbor table includes a

"hold time" that counts down how long a neighbor node can be deemed reliable. The

amount of time remaining is deemed functionally equivalent to the claimed "reliability

count" and "maximum value" parameters. Ogier discloses the use of the hold count but

does not explicitly disclose how the hold count is set or adjusted based on network

traffic conditions. However, in related art, Saleh discloses adjacent neighbor nodes

monitoring reliability between neighboring nodes by using a quality of service technique

of monitoring the interval in seconds between "hello" messages transmitted from

neighboring nodes in order to be considered an active node and not be considered a

dead or inactive node (see Saleh, col. 11, lines 51-60). Saleh discloses the interval

being set by either node and basing the setting on network bandwidth available

(network traffic conditions) (see Saleh, col. 11, lines 32-47). It would have been obvious

to one of ordinary skill in the art at the time of the applicant's invention to modify the

teachings of Ogier with the teachings of Saleh in order to adjust the interval between

status messages from neighboring nodes in order to confirm activeness of the node (i.e.

hello transmissions) based on the state of the network being used (network traffic

conditions). One of ordinary skill in the art would have been motivated to make this

modification to Ogier in order to ensure the use of QoS parameters which would assist

in ensuring that neighbor nodes are not deemed inactive or unavailable wrongfully (i.e.

a condition wherein the neighboring node has no control and the fault is placed on the

network).

24. Regarding claim 17, Ogier and Saleh disclose the system further comprising:

  an input-output module coupled to said central processing module, wherein said

  input-output module is configured to provide input-output interface to said central

  processing module (see Ogier, para. 0034); and

  a counter module coupled to said central processing module, wherein said

  counter module is configured to provide at least one of timing and counting

  functionality to said central processing module (see Ogier, para. 0196). The

  motivation to combine Ogier and Saleh utilized in the rejection of claim 16 applies

  equally as well to claim 17.

25. Regarding claim 18, Ogier and Saleh disclose the system further comprising:

  a neighbor list coupled to said central processing module, wherein said neighbor

  list is configured to store said address of said network element after said bi-

  directional connectivity is established with said network element (see Ogier, para.

  0210). The motivation to combine Ogier and Saleh utilized in the rejection of

  claim 16 applies equally as well to claim 18.

26.   Regarding claim 19, Ogier and Saleh disclose the system wherein said maximum

value is predetermined (see Saleh, col. 11, lines 32-47). The motivation to combine

Ogier and Saleh utilized in the rejection of claim 16 applies equally as well to claim 19.

Response to Arguments

27.   Applicant's arguments filed 09 January 2006 have been fully considered but they

are not persuasive.

28.   (A) Applicant argues on pages 13-15 of the Remarks that Ogier does not teach

the use of "unreliable packets" as claimed. The Examiner does not agree. The

Applicant defines an unreliable packet as a being a packet that does not require a

response. The Examiner maintains that Ogier does teach the use of a packet that does

not require a response. Ogier discloses the utilization of a "hello" message transmitted

by a new neighbor node in order to be discovered (see p. 3, para 0042 and p. 5, para.

0067). Within the use of the neighbor discovery protocol it is understood that this type

of message transmission is not one that requires a response and therefore falls within

the scope of the Applicant's claims. Ogier discloses the transmission of messages by a

new neighbor node, termed "neighbor discovery messages" in order to be recognized

by existing neighbor nodes (see p. 3, para 0042 and p. 5, para. 0067). In order for bi-

directional connectivity to be established, Ogier discloses the use of "NEIGHBOR"

messages that require acknowledgement messages (see p. 3, para 0042 and p. 5,

para. 0068), hence the use of reliable packets when establishing bi-directional

connectivity.

29.   Applicant's arguments with respect to claims 16-19 have been considered but are

moot in view of the new ground(s) of rejection.

BEATRIZ PRIETO
PRIMARY EXAMINER

Conclusion

30.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Templin (US 2001/0040895 A1) discloses an IPv6-IPv4 compatibility aggregatable

    global unicast address format for incremental deployment of IPv6 nodes within

    IPv4.

    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-

3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

    Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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BEATRIZ PRIETO
PRIMARY EXAMINER